Comment Set 18

STATE OF CALIFORNIA—THE RESOURCES AGENCY GRAY DAVIS, Governor

OFFICE OF THE STATE FIRE MARSHAL
Pipeline Safety Division
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Mr. Dwight E. Sanders, Division Chief
State Lands Commission
Division of Environmental Planning
and Management
100 Howe Avenue, Suite 100 South
Sacramento, California 95825-8202

Dear Mr. Sanders:

Upon reviewing the draft environmental impact report (DEIR) for the SFPP, L.P. Concord to Sacramento Petroleum Products Pipeline Project, both the United States Department of Transportation/Office of Pipeline Safety and the California State Fire Marshal's Office have concerns regarding potential statutory and regulatory conflicts if the DEIR were to be implemented as written.

California Government Code Section 51010 states, "It is the intent of the Legislature, in enacting this chapter, that the State Fire Marshal shall exercise exclusive safety regulatory and enforcement authority over intrastate hazardous liquid pipelines and, to the extent authorized by agreement between the State Fire Marshal and the United States Secretary of Transportation, and may act as agent for the United State Secretary of Transportation to implement the federal Hazardous Liquid Pipeline Safety Act (49 U.S.C. Sec. 2001 et seq.) and federal pipeline safety regulations as to those portions of interstate pipelines located within this state, as necessary to obtain federal certification".

18-1

Of concern are items identified in the report, which address "Pipeline Safety and Risk of Accidents". While all other areas of the report are clearly under the authority of the State Lands Commission, item which address pipeline safety are under the purview of the Fire Marshal. Many of the items identified in the report are specifically addressed in 49 Code of Federal Regulations, Part 195.

The following pages itemize the specific areas of the DEIR that we have concerns with.

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California State Fire Marshal Comments:

Reference: Section D.2 Pipeline Safety and Risk of Accidents

18-2

The analysis in this section relies heavily on the statistical data found in the California State Fire Marshal's Hazardous Liquid Pipeline Risk Assessment Study published in 1993. This document looked at hazardous liquid pipeline releases that occurred from 1981 thru 1990 in California.. It is now over 10 years old and no longer is representative of the state of pipeline safety today. Federal pipeline safety regulations have been substantially strengthened and new technology has helped reduce the occurrence of pipeline releases in California by approximately 2/3rds. The ten year average from 1981- 1990 was 42 leaks per year. From 2000-2002 the average was 15 leaks per year. No fatalities have occurred. Our data disputes the following conclusion.

1. Although the California data set is now over 10 years old, national and international data suggest that the frequency of unintentional releases and their causes have not changed appreciably since the study was conducted. Although there are slight annual variations, the frequencies of releases, injuries, and fatalities have remained essentially constant since 1990.

With the implementation of recently enacted DOT pipeline safety regulations addressing pipeline integrity management programs, operator qualification requirements and corrosion control we believe that the industry's pipeline safety record will continue to improve.

Reference: D.2.2.2 State

18-3

The Pipeline Safety Division of the Office of the State Fire Marshal acts as the agent for the DOT and exercises exclusive regulatory and enforcement authority over intrastate pipelines within California. The Pipeline Safety Division also acts as the agent for the DOT in implementing the federal regulations, as those regulations apply to interstate pipeline located within the State. The Division also enforces California State regulations, which impose additional requirements on the State's intrastate pipeline operators — beyond the federal requirements

The California State regulations are includes in the California Government Code, Sections 51010-51019.2. Some of the requirements that exceed federal regulations include the following:

- Every pipeline over 10 years of age and not provided with effective cathodic protection must be hydrostatically tested every three years, except for those lines on the list of higher risk lies, which must be hydrostatically tested annually.

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- Every pipeline over 10 years of age and provided with effective cathodic protection must be hydrostatically tested every five years, except for those lines on the list of higher risk lies, which must be hydrostatically tested every two years.
- Piping within a refined product bulk-loading facility served by pipeline must be pressure tested every five years if cathodically protected, or every three years if not effectively cathodically protected.
- Hydrostatic tests conducted in compliance with the State regulations must be certified by an independent testing firm, approved by the Pipeline Safety Division.

The proposed pipeline is interstate and as such would not be subject to these additional California safety laws.

18-3

Reference: B.2 SFPP's Current Operation

Kinder Morgan Energy Partners, L.P. (KMP) is a publicly traded limited partnership and is the largest independent refined petroleum products system in the United States in terms of volume delivered. KMP's Pacific operations consist of interstate common carrier pipelines regulated by the Federal Energy Regulatory Commission, intrastate pipelines in California regulated by the California State Fire Marshal, and certain non rate-regulated operations ***The California State Fire Marshal regulates interstate pipeline safety under an agent agreement with DOT. While the California State Fire Marshal inspects and reports on interstate pipelines, DOT's Office of Pipeline Safety maintains enforcement authority on interstate pipelines.***

18-4

Reference: B.5.3 System Inspection and Maintenance

Inspections. The pipeline route would be visually inspected at least bi-weekly by line rider patrol in accordance with DOT requirements (49 CFR Part 195) to spot third-party construction or other factors that might threaten the integrity of the pipeline. Additionally, inspection of highway, utility, and pipeline crossing locations would be conducted in accordance with state and federal regulations. Pipe protection level would be inspected annually at all test locations, quarterly at control points and more than quarterly at cathodic protection systems to ensure corrosion control.

Pigging. Pigs or scrapers are devices inserted into the pipeline at launching points and retrieved at receiving points called scraper traps. Pigs are used to clean and/or inspect the pipeline.

"Smart" pigs are devices used to inspect and record the condition of the pipe. Smart pigs detect where corrosion or other damage has affected the wall thickness or shape. SFPP would perform a "baseline" smart pig run for the entire pipeline after the completion of construction. Once in operation, additional smart pig runs would be performed every five years in accordance with DOT regulations.

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Hydrostatic Testing. As required by the DOT, system inspection and maintenance would include hydrostatic testing to check for pipeline leakage (see Section B.4.1.5).

Valves. Block valves are cycled and inspected twice annually, not to exceed seven months to ensure proper operation (per 49 CFR 195.420). Codes do not specify inspection requirements for check valves. ***This section does not include the most recent DOT pipeline regulations regarding; Pipeline Integrity Management in High Consequence areas or Corrosion Control.***

18-5

Reference: Effects of Pipeline Age on External Corrosion

Table D.2-1 below presents the California data by decade of pipeline construction. In reviewing these data, it is important to note that the California study was completed in 1993. At that time, the pipe constructed during the 1980s had only been in operation for a few years. One should not conclude that because there were no releases caused by external corrosion for pipelines constructed after 1980 that corrosion is not a concern in newer pipelines. Rather, these data reflect the fact that the relatively new pipe had not yet been in service long enough for external corrosion to extend through the pipe wall, resulting in an unintentional release. As each decade passes, the pipe constructed during the 1980s will likely have an external corrosion–caused unintentional release rate similar to that shown in the table for the prior decade. For example, during the 2000s, the frequency of releases caused by external corrosion for pipe constructed in the 1980s is expected be around one incident per 1,000 mile-years (similar to the 1970s data in Table D.2-1). The frequency will likely stabilize around one to two incidents per 1,000 mile-years, approximately the 1960s rate, after significant improvements were made in pipe and coating technology. As noted earlier, significant improvements were made in the 1940s and 1950s. Improvement since this time has been steady, but it has been much more gradual. ***This analysis is faulty since it does not consider that this pipeline will be smartpigged at intervals sufficient to detect and mitigate external corrosion anomalies prior to failure.***

18-6

Reference: D.2.2.1 Federal

Interstate and intrastate hazardous liquid transportation by pipeline and rail fall under the jurisdiction of the U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety (DOT). Hazardous liquid pipelines must conform with the design, construction, testing, operation and maintenance regulations contained in Title 49 Code of Federal Regulations (CFR) Part 195, "Transportation of Hazardous Liquids by Pipeline," as authorized by the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. 2004).

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However, the DOT does not issue a construction permit or conduct a plan check for all pipeline projects. ***It should be noted that as state agent for DOT, the SFM does review the design and construction of all major pipeline projects in the state.*** 18-7

49 CFR 194 prescribes the federal requirements for response plans for onshore oil pipelines. Other relevant federal requirements applicable to the transportation of hazardous liquids by pipeline are contained in 40 CFR Parts 109, 110, 112, 113, and 114, which pertains to the need for "Oil Spill Prevention Control & Countermeasures (SPCC) Plans" and Public Law 101-380 (H.R.), promulgated in response to the Oil Pollution Act (OCA) of 1990. 18-8

Table D.2-27. Pipeline Operation Impacts

Cause of Impact	Impact	Applicant Design Measures
External Corrosion	Property or environmental damage, injury, or death resulting from external corrosion–caused pipeline releases.	The Applicant has proposed to install a high quality Pritec exterior coating. The Applicant also plans to conduct internal inspections (smart pigs) every five years. Compliance with 49 CFR 195 Subparts C, D, F, G. and J regulatory requirements. (See Section C.2.2.1.)
Internal Corrosion	Property or environmental damage, injury, or death resulting from internal corrosion–caused pipeline releases.	The Applicant also plans to conduct internal inspections (smart pigs) every five years. Compliance with 49 CFR 195 Subparts C, D, F and G regulatory requirements. (See Section C.2.2.1.)
Third Party Damage	Property or environmental damage, injury, or death resulting from third party damage–caused pipeline releases.	The Applicant has proposed heavier wall (0.500") pipe beneath major river crossings. Compliance with 49 CFR 195 Subparts C, D, F, and G regulatory requirements. (See Section C.2.2.1.)
Human Operating Error	Property or environmental damage, injury, or death resulting from human operating error–caused pipeline releases.	Compliance with 49 CFR 195 Subparts C, F, and G regulatory requirements. (See Section C.2.2.1.)
Design Flaw	Property or environmental damage, injury, or death resulting from design flaw–caused pipeline releases.	Compliance with 49 CFR 195 Subparts C and E regulatory requirements. (See Section C.2.2.1.)
Equipment Malfunction	Property or environmental damage, injury, or death resulting from equipment malfunction–caused pipeline releases.	Emergency backup control center
Fire	Property or environmental damage, injury, or death resulting from fire as a result of a pipeline releases.	Implementation of a leak detection system to identify potential unintentional releases.
Maintenance	Property or environmental damage, injury, or death resulting from maintenance–caused pipeline releases.	Compliance with 49 CFR 195 Subparts F and G regulatory requirements. (See Section C.2.2.1.)
Weld Failure	Property or environmental damage, injury, or death resulting from weld failure–caused pipeline releases.	Compliance with 49 CFR 195 Subpart D regulatory requirements. (See Section C.2.2.1.)

There are many errors in referencing applicable sections of Part 195

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Reference: S-2b Monthly Leak Detection Tests. The Applicant shall perform shut-in leak detection tests monthly. These "stand-up" tests shall be held for a period sufficient to detect a 5 BPH release, but in no case for less than 12 hours. This will reduce the potential release volumes of slow releases by a factor of twelve. ***This is not technically feasible and is in conflict with DOT CFR Part 195.134 pipeline safety regulation.*** **18-9**

Reference: S-2c Valve Location Review.
At least 60 days prior to beginning construction, SFPP shall provide to the CSLC for review and approval documentation on all pipeline valves, including those added as a result mitigation measures in the EIR. The review shall include the following: **18-10**

A detailed pipeline profile that clearly illustrates topography along the final route.

A specific review of the location of the proposed check valve at MP 20.1. An analysis shall be conducted to determine if the check valve would be more effective if it were relocated upstream of the hill which rises to an elevation of about 80 feet. ***The State Fire Marshal will review the placement of block and check valves for compliance with Part 195 regulations.***

Reference: Impact S-2.1: External Corrosion

External corrosion can result in pipeline leaks or ruptures. (Class I) **18-11**

Impact Discussion
SFPP will perform a baseline internal inspection (smart pig) run after pipeline construction is complete. They plan to perform subsequent smart pig runs once every five years. ***DOT Part 195 .452 prescribes the requirements for periodic internal inspections of pipelines. This language would conflict with federal pipeline safety regulations.***

Internal inspections, made with modern instrumented pigs, provide an excellent means for minimizing the likelihood of external corrosion–caused unintentional releases. This inspection method can also discover third party line damage and other line pipe defects. Further, the use of advanced coatings will minimize the likelihood of external corrosion–caused releases. As a result, Mitigation Measure S-2e is recommended.

In addition to the "smart pig" inspections, the Applicant plans to employ the following measures to minimize the recurrence of external corrosion–caused releases.

- **Rectifier Readings.** As required by 49 CFR 195.416 (c), "Each operator shall, at intervals not exceeding two-and-one-half months, but at least six times each calendar year, inspect each of its cathodic protection rectifiers." ***Replaced by 49 CFR 195 Subpart H*** **18-12**

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- **Pipe to Soil Readings.** At least once each calendar year, at intervals not exceeding 15 months, hazardous liquid pipeline operators are required to test their cathodic protection system by taking pipe to soil readings in accordance with 49 CFR 195.416 (a). ***Replaced by 49 CFR 195 Subpart H***
- **Corroded Pipe.** The strength of any pipe known to be corroded would normally be evaluated using ASME B31G, *Manual for Determining the Remaining Strength of Corroded Pipelines*. This method considers the size, shape, and remaining wall thickness of corroded pipe to determine its safe operating pressure.
- **Inspections.** Each time buried pipe is exposed for any reason, it would be examined for evidence of external corrosion in accordance with 49 CFR 195.416 (e). If active corrosion is found, the operator is required to investigate and determine the extent. ***Replaced by 49 CFR 195 Subpart H***
- **Maintain Records**. Pipeline operators are required to maintain records of the DOT required inspections.

18-12

The Applicant has proposed protecting the pipeline from external corrosion using an impressed current system. However, interference from other substructures, local soil conditions, and other factors can render an impressed current system inadequate in localized areas. A close interval cathodic protection survey, conducted with both on-off rectifier readings, can often identify locations with cathodic protection levels below acceptable levels; these surveys can also be used to identify stray currents, which can affect cathodic protection system performance. (These surveys involve taking pipe to soil readings approximately every three feet along the entire pipeline.) Mitigation Measure S-2f it recommended to ensure that adequate cathodic protection levels are maintained throughout the operating life of the pipeline.

Mitigation Measures for Impact S-2.1: External Corrosion

S-2e Conduct Pipeline Inspections. The Applicant shall conduct an internal pipeline inspection, using a modern instrumented internal inspection device (smart pig) and a caliper tool as soon as practical immediately after construction has been completed but before operation. Subsequent internal inspections shall be conducted within six months of the anniversary date of the first inspection, every five years. Defects shall be repaired in accordance with applicable codes, industry standards, and regulations. This mitigation measure conflicts with DOT pipeline regulations. Also, better data is obtained with a liquid medium in the pipeline i.e. product. ***Conflicts with DOT pipeline safety regulations***

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